

14th Annual

SCIENCE & ENGINEERING TECHNOLOGY CONFERENCE/DEFENSE TECH EXPOSITION

***EVOLVING THE DEFENSE S&T PROGRAM TO SUPPORT "SUSTAINING U.S.
GLOBAL LEADERSHIP: PRIORITIES FOR 21ST CENTURY DEFENSE"***

- ▶ Overview of the changing global security environment and the challenges facing Military operations
- ▶ Game changing S&T investments being made by the Military Services and Defense Agencies
- ▶ Challenges facing the Combatant Commanders and the role S&T can play
- ▶ Poster Papers on emerging concepts and technology
- ▶ Discussion of new business opportunities with DoD Speakers



Event #3720

April 24-26, 2013

Gaylord National Hotel ▶ National Harbor, MD ▶ www.ndia.org/meetings/3720

LOCATION

Gaylord National Hotel
201 Waterfront St.
National Harbor, MD 20745
(301) 965-2000

ATTIRE

Appropriate dress for the conference is business, coat & tie for civilians and Class A uniform or uniform of the day for military personnel.

ID BADGE

During conference registration, each Attendee will be issued an identification badge. Please be prepared to present a valid picture ID. Badges must be worn at all conference functions.

SPEAKER DONATION

In lieu of Speaker gifts, a donation will be made to the Fisher House Foundation. For additional information, please visit: <http://www.fisherhouse.org>

ADVERTISE

Advertise in *National Defense* magazine and increase your organization's exposure. *National Defense* will be distributed to Attendees of this event, as well as other NDIA events. For more information, contact Mr. Dino Pignotti, VP Advertising, at (703) 247-2541 or dpignotti@ndia.org.

NDIA EVENTS

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Meetings & Events
Schedule of Events

SYMPOSIUM OVERVIEW

History has shown that science and technology is a force multiplier and can be leveraged to produce new or enhanced military capabilities. The identification of which capabilities will be required to meet the challenges of the rapidly changing global security environment and which technologies will enable development of these capabilities is becoming increasingly important, especially during the time of a declining Defense budget.

The U.S. Military has concluded operations in Iraq and will significantly reduce its presence in Afghanistan over the next 2 years. In the recently published "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense," U.S. Armed Forces are directed to rebalance operational forces from Iraq and Afghanistan to the Asia-Pacific region and develop the capability to "Project Power Despite Anti-access/Area Denial Challenges." This direction supports the national desire to provide a secure environment in the Asia-Pacific region that will encourage economic prosperity. The DoD S&T program will play a critical role in developing the enabling technologies for the required military capabilities in the Asia-Pacific region and the challenges associated with anti-access/area denial.

The challenges associated with irregular warfare and counter-insurgency operations that the U.S. Military encountered in Iraq and Afghanistan are not likely to go away. The conventional Military capabilities that were developed during the Cold War surprised many state and non-state actors when they were employed during the Gulf War with amazing effectiveness. Advanced technologies gave the U.S. Military advantages in surveillance, precision targeting, communications, and navigation. The advent of information-based warfare feed the emergence of irregular and insurgency warfare by non-state actors. Irregular warfare and counter-insurgency operations will remain the doctrine of choice for potential adversaries and the U.S. Military must prepare for this threat. It is anticipated that small units specializing in innovative, low-cost, and small-footprint operations will have increased utility in irregular warfare and counter-insurgency operations. Selecting the right irregular warfare/counter-insurgency capabilities is a critical first step in determining which technologies should receive investment priority.

U.S. Armed Forces have frequently been called upon to conduct humanitarian and disaster relief operations, both at home and abroad. Our Military possesses rapidly deployable capabilities including airlift and sealift, medical evacuation and care, surveillance, and communications that can provide great assistance to relief agencies, tasked with providing aid to victims of natural or man-made disasters. The application of "soft power" can often be more effective in achieving national security goals than the application of "hard power." The Department should identify those technologies, contracted for or commercially available, that will provide new and enhanced capabilities to support this mission.

At this year's conference, the Services and Combatant Commands will describe what capabilities will likely be needed for the Joint Force to be successful in the evolving global security environment, with a focus on the Asia-Pacific region. Additionally, OSD, the Services, and Agencies will present their priorities for focusing technology initiatives, while maintaining the balance between conventional and irregular warfare/counter-insurgency capabilities. Given the realities to also reduce lifecycle costs, Service and Agency Speakers will discuss which technologies must be matured in the near term and the future. They will also highlight areas of synergy across technology disciplines which can be mined to maintain operational effectiveness during reduced budget years.

Speakers will be available in the "Speakers Corner" after each session. The conference will also feature poster paper sessions with Authors available for discussion and interaction on emerging concepts and technology.

TUESDAY, APRIL 23, 2013

12:00 PM – 6:00 PM

Conference & Exhibitor Registration
Woodrow Wilson Foyer

WEDNESDAY, APRIL 24, 2013

7:00 AM – 6:30 PM

Conference Registration
Woodrow Wilson Foyer

7:00 AM – 8:00 AM

Continental Breakfast

Woodrow Wilson Foyer

8:00 AM – 8:15 AM

Welcome Remarks

Woodrow Wilson A

- ▶ MG Barry D. Bates, USA (Ret), Vice President of Operations, NDIA
- ▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; S&ET Division Chair

8:15 AM – 9:15 AM

Keynote Address: Acting Assistant Secretary of Defense, Research & Engineering

Woodrow Wilson A

- ▶ Mr. Alan R. Shaffer, Acting Assistant Secretary of Defense, Research & Engineering, OASD(R&E)

9:15 AM – 2:00 PM

FY 2014 PRESIDENT'S BUDGET REQUEST AND OPPORTUNITIES FOR COLLABORATION SESSION

Woodrow Wilson A

In this session, we will present the Fiscal Year 2014 President's Budget Request for the DoD S&T program. Specific programs that provide conference Attendees opportunities to engage in collaborative efforts with the DoD S&T community will also be highlighted. Presentations will provide information on technology areas of high interest to the DoD, timelines, and points of contact for the submission of proposals. Opportunities for both Industry and Academia will be covered. This session will include a wide range of programs, from the larger technology demonstrations funded by the Joint Capability Technology Demonstration program, that lead to the evaluation of military utility of advanced technology by a Combatant Commander; to the more focused technology development efforts that are funded by the Test & Evaluation/Science & Technology (T&E/S&T) program. Opportunities for proposing commercial off-the-shelf technology to meet current military needs will be addressed by "Rapid Fielding, A Path for Emerging Concept and Capability Prototyping" presentation. The morning portion of this session will be rounded out with brief presentations by poster paper Authors, highlighting the topics of poster papers that will be on display. This session will be closed out with afternoon presentations of the DARPA and IARPA Science & Technology Programs.

Co-Chairs:

- ▶ Dr. Raj K. Aggarwal, Managing Director, Advanced Research & Technology, College of Engineering, Iowa State University
- ▶ Dr. Kenneth Potocki, Former Program Manager and Assistant Laboratory Director, JHU/APL

9:15 AM – 9:45 AM

FY 2014 President's Budget Request for DoD S&T Program

Woodrow Wilson A

- ▶ Mr. Robert W. Baker, Deputy Director, Plans Programs, OASD(R&E)

9:45 AM – 6:30 PM

Exhibit Hall Open

Exhibit Hall - Woodrow Wilson BCD

9:45 AM – 10:00 AM

Networking Break

Exhibit Hall - Woodrow Wilson BCD

10:00 AM – 10:30 AM

Rapid Fielding: A Path for Emerging Concept and Capability Prototyping

Woodrow Wilson A

- ▶ Mr. Earl Wyatt, Deputy Assistant Secretary of Defense, Rapid Fielding, OASD(R&E)

10:30 AM – 11:00 AM

The DoD T&E/S&T Program

Woodrow Wilson A

- ▶ Mr. George Rumford, T&E/S&T Program Manager, Defense Test Resource Management Center

11:00 AM – 11:20 AM

DoD Basic Research Program

Woodrow Wilson A

- ▶ Dr. Robin Staffin, Director, Basic Science, OASD(R&E)

- 11:20 AM – 11:40 AM** **NSF Basic Research Program**
Woodrow Wilson A
▶ Dr. Cora B. Marrett, Deputy Director, NSF
- 11:40 AM – 12:00 PM** **Poster Papers: Author Presentations**
Woodrow Wilson A
▶ Dr. Raj K. Aggarwal, Managing Director, Advanced Research & Technology, College of Engineering, Iowa State University
- 12:00 PM – 1:00 PM** **Networking Buffet Lunch**
Exhibit Hall - Woodrow Wilson BCD
- 1:00 PM – 1:30 PM** **The DARPA S&T Program**
Woodrow Wilson A
▶ Dr. Steven H. Walker, Deputy Director, DARPA
- 1:30 PM – 2:00 PM** **The IARPA S&T Program**
Woodrow Wilson A
▶ Dr. Peter Highnam, Director, IARPA
- 2:00 PM – 5:00 PM** ***AIR FORCE SCIENCE & TECHNOLOGY PROGRAM SESSION***
Woodrow Wilson A
The Air Force, throughout its history, has maintained a dominant trajectory of discovery, development and integration of warfighting technologies for our air, space and cyberspace missions. Despite the fiscal environment, the Air Force today is strategically engaged in shaping its future through key studies in areas of air dominance and cyberspace. This session will present key issues, study findings and potential future pathways for Air Force technologies.
Co-Chairs:
▶ Brig Gen Michael C. Dudzik, USAF (Ret)
▶ Mr. Christopher Clay, Deputy Division Chief, Science & Technology Division, Office of the Deputy Assistant Secretary of the Air Force for Science, Technology, & Engineering
- 2:00 PM – 3:00 PM** **Global Horizons**
Woodrow Wilson A
▶ Dr. Mark T. Maybury, Chief Scientist, U.S. Air Force
- 3:00 PM – 3:30 PM** **Networking Break**
Exhibit Hall - Woodrow Wilson BCD
- 3:30 PM – 4:00 PM** **Air Force Capability Requirements and S&T Overview**
Woodrow Wilson A
▶ Dr. David Walker, Deputy Assistant Secretary of the Air Force for Science, Technology, & Engineering, OSAF/AQ
- 4:00 PM – 4:30 PM** **AFOSR/Cyber and Information Technology**
Woodrow Wilson A
▶ Dr. Bob Bonneau, Department Chair, AFOSR Information, Decision, and Complex Networks Department, AFOSR
- 4:30 PM – 5:00 PM** **Air Force Near and Mid-Term Cyber Technology**
Woodrow Wilson A
▶ Capt Bob Birrer, USAF, PhD, Science and Technology Division, Science and Technology Directorate, OSAF/AQRT
- 5:00 PM – 6:30 PM** **Networking Reception (Hosted Beer & Wine)**
Exhibit Hall - Woodrow Wilson BCD

THURSDAY, APRIL 25, 2013

- 7:00 AM – 5:00 PM** **Conference Registration**
Woodrow Wilson Foyer
- 7:00 AM – 7:55 AM** **Continental Breakfast**
Woodrow Wilson Foyer
- 7:55 AM – 8:00 AM** **Opening Remarks**
Woodrow Wilson A
▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; S&ET Division Chair
- 8:00 AM – 12:00 PM** **ARMY SCIENCE & TECHNOLOGY PROGRAM SESSION**
Woodrow Wilson A
The Army will continue to have a large role consistent with DoD 21st Century Defense Guidance and have missions around the globe (in and out of Asia-Pacific) that require Soldiers on the ground to be equipped with the best technology to prevent, shape and win decisively. Soldiers and squads must operate with improved lethality, protection and situational awareness in the ever-changing, complex environments with diverse threats. The Army of the future requires equipment capabilities that are both affordable and versatile. With a constrained budget, the Army will have to produce a force that is smaller yet still highly capable. In this session, the Presenters will discuss how Army S&T will work to meet these challenges.
Co-Chairs:
▶ Dr. Walter F. (Rick) Morrison, WFM Consulting
▶ Ms. Nancy Harned, Executive Director, Strategic Plans and Program Planning, ODASA(R&T)
- 8:00 AM – 8:30 AM** **Capability Needs: Near and Far**
Woodrow Wilson A
▶ Mr. Rickey Smith, Director, Army Capabilities Integration Center (Forward)
- 8:30 AM – 9:00 AM** **Army S&T Program Overview**
Woodrow Wilson A
▶ Ms. Nancy Harned, Executive Director, Strategic Plans and Program Planning, ODASA(R&T)
- 9:00 AM – 10:00 AM** **Army S&T Investment Portfolios**
Woodrow Wilson A
▶ Ms. Catherine Hurley, Director, Soldier Portfolio, ODASA(R&T)
▶ Mr. Matthew Donohue, Director, Ground Portfolio, ODASA(R&T)
- 10:00 AM – 10:30 AM** **Networking Break**
Exhibit Hall - Woodrow Wilson BCD
- 10:00 AM – 3:30 PM** **Exhibit Hall Open**
Exhibit Hall - Woodrow Wilson BCD
- 10:30 AM – 11:30 AM** **Army S&T Investment Portfolios (Continued)**
Woodrow Wilson A
▶ Mr. Kristopher Gardner, Director, C3I Portfolio, ODASA(R&T)
▶ Mr. Todd Turner, Director, Air Portfolio, ODASA(R&T)
- 11:30 AM – 12:00 PM** **Army Power & Energy S&T**
Woodrow Wilson A
▶ Mr. Robert Saunders, Director, Industry Relations/Power & Energy, ODASA(R&T)
- 12:00 PM – 1:00 PM** **Networking Buffet Lunch**
Exhibit Hall - Woodrow Wilson BCD

1:00 PM – 5:00 PM

NAVAL SCIENCE & TECHNOLOGY PROGRAM SESSION

Woodrow Wilson A

Providing affordable, asymmetric and game changing capabilities to the naval warfighter continues to be the primary focus for Navy and Marine Corps science and technology, and research, development, test and evaluation communities. In this session, senior leaders from Navy and Marine Corps S&T and RDT&E, and OPNAV communities will discuss current challenges and opportunities in this budget constrained environment.

Co-Chairs:

- ▶ Mr. Dennis L. Ryan, III, Science & Technology Planning Director, JHU/APL
- ▶ Dr. Lawrence Schuette, Acting Director of Research, ONR

1:00 PM – 1:30 PM

Naval S&T: Delivering Disruptive Technologies with Affordable Asymmetric Advantages

Woodrow Wilson A

- ▶ RADM Matthew L. Klunder, USN, Chief of Naval Research, ONR

1:30 PM – 2:15 PM

The Foundations of Concept Based Experimentation

Woodrow Wilson A

- ▶ BGen Mark R. Wise, USMC, VCNR and Commanding General, MCWL

2:15 PM – 3:00 PM

OPNAV Perspective on Science and Engineering

Woodrow Wilson A

- ▶ Mr. Brian J. Persons, Assistant Deputy Chief of Naval Operations, Warfare Systems

3:00 PM – 3:30 PM

Networking Break: Last Chance to View Exhibits & Poster Papers

Exhibit Hall - Woodrow Wilson BCD

3:30 PM – 5:00 PM

Panel Discussion

Woodrow Wilson A

Moderator:

- ▶ Dr. Chris Fall, Director, International Liaison Office, ONR-Global

Basic and Applied Research Opportunities and Advances

- ▶ Dr. Lawrence Schuette, Acting Director of Research, ONR

Perspective on Transition

- ▶ Dr. Thomas Killion, Director of Transition, ONR

Naval Innovation in Challenging Times

- ▶ Mr. Craig A. Hughes, Acting Director of Innovation, ONR

5:00 PM

Adjourn for the Day

FRIDAY, APRIL 26, 2013

7:00 AM – 12:00 PM

Conference Registration

Woodrow Wilson Foyer

7:00 AM – 7:55 AM

Continental Breakfast

Woodrow Wilson Foyer

7:55 AM – 8:00 AM

Opening Remarks

Woodrow Wilson A

- ▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; S&ET Division Chair

8:00 AM – 12:00 PM

THE COCOM PERSPECTIVE AND ADDITIONAL TOPICS OF HIGH INTEREST

Woodrow Wilson A

Meeting the capability needs of the Warfighter is the most important goal of the DoD Science & Technology program. Establishing strong communications between the Warfighter and the Researcher is essential for understanding these capability needs. Warfighters traditionally communicate their needs in terms of capability gaps. The DoD S&T community must be able to address those gaps in S&T projects and demonstrate how enabling technology can effectively fill them. In this session, Speakers will describe how technology enabled capabilities are actually developed and delivered to the Combatant Commanders. The Science Advisor from USCENTCOM will then describe what new operational capabilities would make a big difference in USCENTCOM's ability to conduct military operations in their areas of responsibility. This presentation will be followed by an in-depth look at the challenges associated with overcoming the obstacles associated with the Anti-Access/Area Denial problem. The session will be closed out with presentations on how the Defense Technical Information Center can achieve better connectivity of the R&E Community and how the DoD is working to take advantage of industry's investment in independent research and development.

Co-Chairs:

- ▶ Mr. Mike Knollmann, Director, Joint Operations Support, OASD(A)
- ▶ Mr. Kurt Kratz, Associate Director, Joint S&T Support, OUSD(AT&L)A
- ▶ Dr. Jim Wasson, Battelle Memorial Institute

8:00 AM – 8:35 AM

How Capabilities are Developed and Delivered to the Combatant Commanders

Woodrow Wilson A

- ▶ Mr. Kurt Kratz, Associate Director, Joint S&T Support, OUSD(AT&L)A

8:35 AM – 9:10 AM

USCENTCOM

Woodrow Wilson A

- ▶ Mr. Thomas R. Smith, Chief, Science & Advanced Concepts Branch, USCENTCOM

9:10 AM – 9:45 AM

Challenges of Anti-Access/Area Denial

Woodrow Wilson A

- ▶ Dr. Brian Beachkofski, Special Assistant to the Acting ASD(R&E), OASD(R&E)

9:45 AM – 10:15 AM

Networking Break

Woodrow Wilson Foyer

10:15 AM – 10:50 AM

Connecting the R&E Community: Defense Technical Information Center

Woodrow Wilson A

- ▶ Mr. Christopher Thomas, Administrator, DTIC

10:50 AM – 11:30 AM

IR&D Marketplace Presentation

Woodrow Wilson A

- ▶ Col Charles "Brooks" McFarland, USAF, Military Assistant to the ASD(R&E), OASD(R&E)

11:30 AM – 12:00 PM

Poster Paper Winner Announcement

Woodrow Wilson A

- ▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; S&ET Division Chair

12:00 PM

Closing Remarks & Conference Adjourned (Boxed Lunch Served)

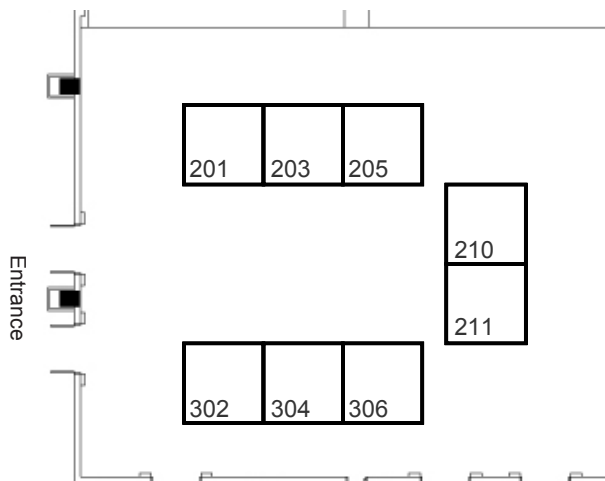
Woodrow Wilson A

- ▶ Mr. James Chew, Advanced Concepts Strategic Development, General Atomics; S&ET Division Chair

EXHIBITS FLOORPLAN

Woodrow Wilson BCD

As of 4-19-13



EXHIBITING COMPANIES

Listed by Booth Number

As of 4-19-13

| | |
|------------|---|
| 201 | Evogen, Inc. |
| 203 | DoD Office of Corrosion Policy and Oversight |
| 205 | Strategy Bridge |
| 211 | Defense Technical Information Center |
| 302 | Torrey Pines Logic |
| 304 | Tactical Defense Media |
| 306 | Morgan State University, Office of Research & Economic Development |

EXHIBITOR PROFILES

As of 4-19-13

Defense Technical Information Center - Booth 211

The Defense Technical Information Center (DTIC®) is the premier provider of defense scientific and technical information. DTIC also designs and hosts more than 100 defense-related Web sites, including password-protected Research and Engineering (R&E) Portal, offering DoD personnel, other federal employees and their contractors access to a variety of defense-related technical information.

DoD Office of Corrosion Policy and Oversight - Booth 203

DoD Office of Corrosion Policy and Oversight was established in response to the National Defense Authorization Act of 2003. This office has sponsored over 140 R&D and O&M projects, with numerous resources available at corrdefense.org and corrconnect.org: corrosion training, policies and regulations, corrosion handbook, literature database, and product introduction process. For more information, visit: <http://www.corrdefense.org>

Evogen, Inc. - Booth 201

Evogen blends the lab-tested and field-proven aerosol collection products from Sceptor Industries with High Definition molecular diagnostic collection and detection to meet the needs of a diverse range of customers. The advanced biological system platforms, assays and reagent kits, and services will detect and identify biological threat agents. For more information, visit: <http://evogen.com>

Morgan State University, Office of Research & Economic - Booth 306

Morgan State University is the state of Maryland's legislatively designated Public Urban Research University. The university develops some of the Nation's most advanced and innovative scientific and technologically applied research projects in cybersecurity and cyberinformatics, rapid capture and detect pathogenic technologies and digital systems communication. Morgan State looks forward to "growing the future, leading the world."

Strategy Bridge - Booth 205

Strategy Bridge subject matter experts can deliver Systems Engineering and Project Management topics in facilitated workshops, through formal courses, or by establishing Systems Engineering Centers of Excellence. Strategy Bridge consultants help organizations develop strategies and executable plans that lead to bottom-line results. We specialize in developing project and systems engineering plans that can be successfully implemented.

Tactical Defense Media - Booth 304

Tactical Defense Media publications offer readers insight into DoD program requirements and industry technologies that support joint force ops including mounted and dismounted protection systems, intel and comms applications, tactics, and training. TDM publications examine best practices and lessons learned from military and civilian authority, warfighters, and law enforcement.

Torrey Pines Logic - Booth 302

Torrey Pines Logic provides research, design, development and custom solutions using visible and IR sensors, lasers, image processing and analysis, wireless and IR-based communications, computer graphics and video.

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PROCEEDINGS

Proceedings will be available on the web through the Defense Technical Information Center (DTIC) two weeks after the conference. All registered Attendees will receive an email notification once the proceedings are available.

SURVEY

A survey will be e-mailed to you after the conference. NDIA would appreciate your time in completing the survey to help make our event even more successful in the future.

S&ET DIVISION SUPPORT

S&ET Division Chair:

Mr. James Chew, Advanced Concepts Strategic Development, General Atomics

S&ET Division Secretary:

Mr. Michael Liggett, Director, Technology Programs, Raytheon Corporation

S&ET Conference Chair:

Dr. Walter F. (Rick) Morrison, WFM Consulting

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Thank you for attending!
We hope to see you at a future event!

SAVE THE DATE

C4ISR Breakfast - Event #392E
Thursday, June 6, 2013
Hyatt Regency Crystal City, Arlington, VA

Presentation by
*Mr. Alan R. Shaffer, Acting Assistant Secretary of Defense,
Research & Engineering, OASD(R&E)*

To register, visit: <http://www.ndia.org/meetings/392E>

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April 24-26, 2013

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